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Control of Agriculture

Soil Conservation Service

Portland, Oregon



Water Supply Outlook for Oregon as of JANUARY 1, 1983



TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: FRESH POWDER SNOW ON ELEPHANT MOUNTAIN, NEAR THE WEST FORK OF HYALITE CREEK, IN MONTANA.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE ADDRESS

Alaska Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504

Arizona Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025

Colorado (N. Mex.) P. O. Box 17107, Denver, Colorado 80217

Idaho Room 345, 304 N. 8th. St., Boise, Idaho 83702

Montana P. O. Box 98, Bozeman, Montana 59715

Nevada P. O. Box 4850, Reno, Nevada 89505

Oregon 1220 S. W. Third Ave., Portland, Oregon 97204

Utah 4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138

Washington 360 U. S. Court House, Spokane, Washington 99201

Wyoming P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.



₩GPO 693-033

WATER SUPPLY OUTLOOK FOR OREGON

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

JANUARY 1, 1983

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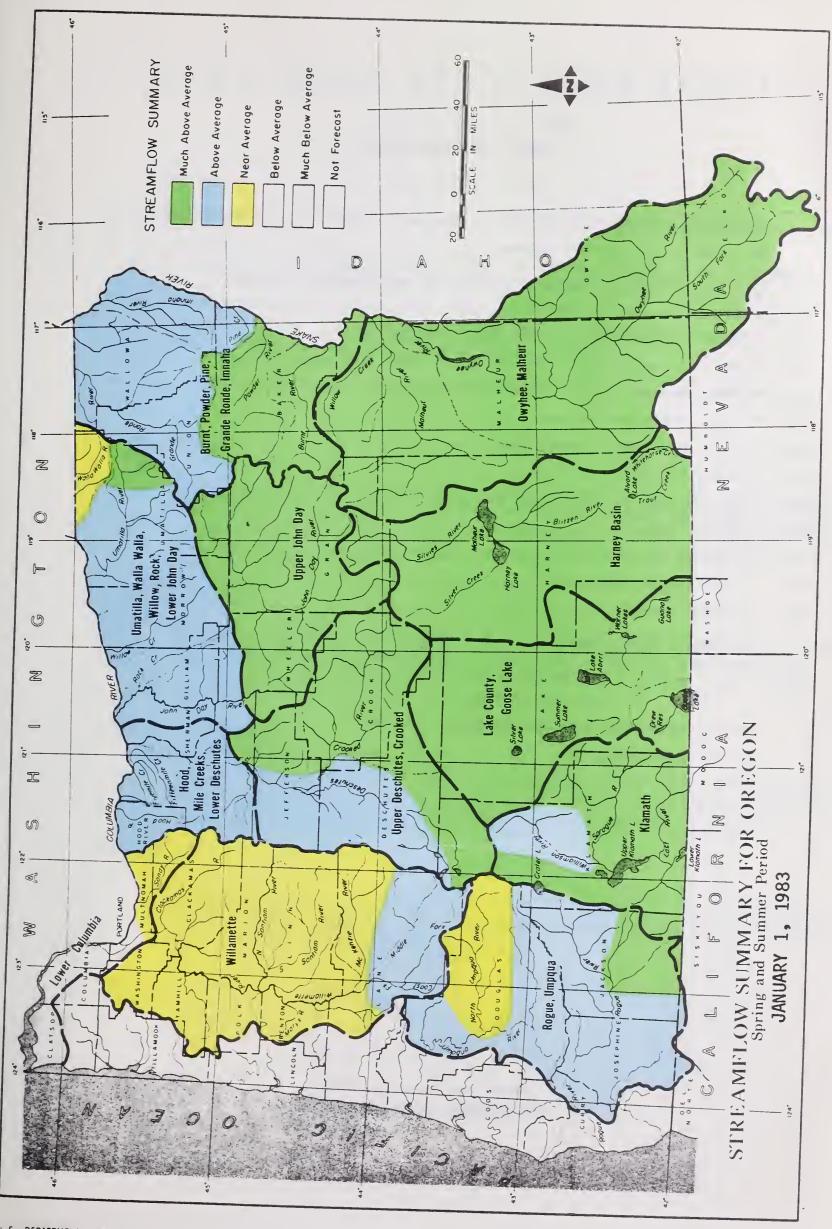
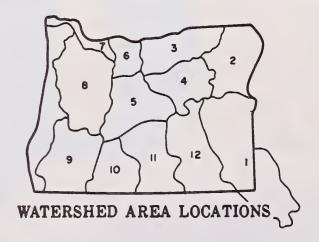


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WATER SUPPLY OUTLOOK AND SUMMARY FOR OREGON

JANUARY 1, 1983

SNOW COVER

The Mountain snowpack is above 130% of average except for a few areas. The Umpqua, Clackamas, Umatilla and Grande Ronde drainages all have a snow cover which is 110 - 130% of average. Most of the Willamette and the Hood River drainages are near average for January 1.

PRECIPITATION

December brought copious amounts of precipitation to most of Oregon. The northern part of the state from Hood River to Pendleton was slightly below average. This precipetation fell as snow in the mountains and built the excellent snowpack.

RESERVOIR STORAGE

Twenty-four principal irrigation reservoirs are storing 2,091,000 acre feet of water or 128% of average. This is about 2/3 of usable capacity. Most reservoirs should fill from the spring runoff.

STREAMFLOW

Streamflow for the water year todate (Oct. - Dec.) has been above to much above average. This has contributed to the excellent reservoir storage in the state.

Prospective streamflow as a percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% OF AVERAGE
Owyhee net Inflow Grande Ronde @ LaGrande Umatilla @ Pendleton Deschutes @ Benham Falls Willamette Mid.Fk. near Oakridge	Feb July March - Sept. March - Sept. April - July April - July	150 130 115 115 115
Rogue @ Raygold Upper Klamath Lake net Inflow Silvies near Burns	April - July Feb Sept. March - July	119 120 152

These forecasts assume normal weather conditions will occur thoughout the forecast period.

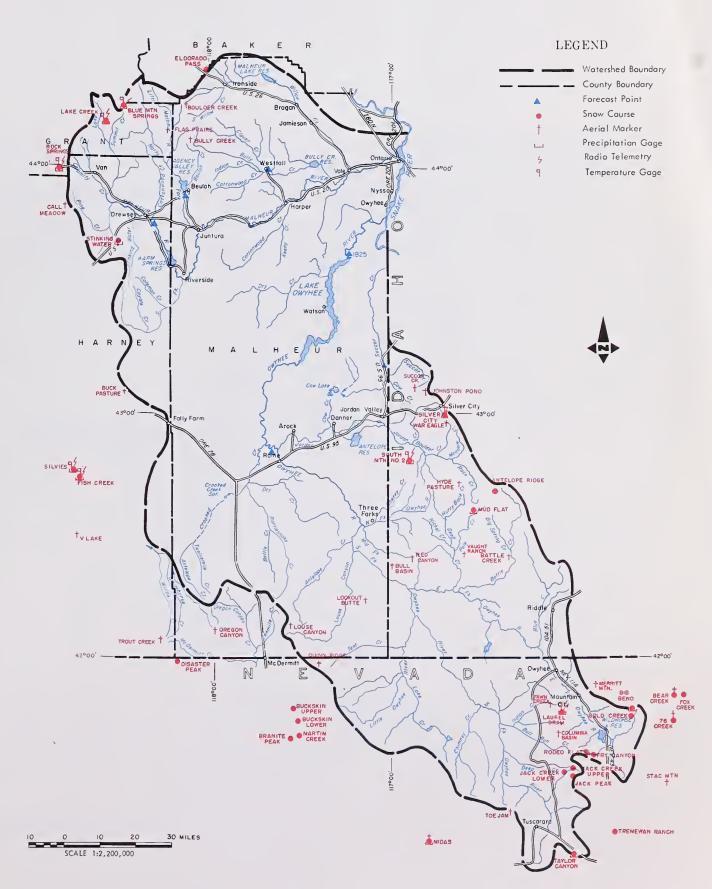
The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators.

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are forecast to be excellent. An excellent snowpack is building in the mountains and will provide abundant streamflow next spring and summer. Winter precipitation has been 150% of average. All large reservoirs are storing excellent amounts of water. 1983 will be a good water year.



STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Bully Creek at Warmsprings, near Vale, OR Malheur River near Drewsey, OR Malheur River, No. Fk. at Beulah, OR Owyhee Reservoir net Inflow Owyhee River near Rome, OR Succor Creek near Jordan Valley, OR	22 169 123 119 100 867 558 887 22	175 158 169 145 149 150 142 144 143	March-May FebJuly April-Sept. FebJuly April-Sept. FebJuly April-Sept. FebJuly FebJuly		12.6 b 107 73 82 67 578 392 614 15.4 b

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

TOREGAST DATE OF LOW				VESEKANIK SINKARE (II	ilousullu i	nu. I (.)	END OF I	IONTH
FORECAST POINT	Low Flow Value	Ju Carli Will	Average Date of Low Flow	RESERVOIR	Usable	Usable Storage		
TORECAST TOINT	Second/Ft.	Recede to Low Flow Value	Value	RESERVOIR	Capacity	This Year	Last Year	Average C
Owyhee near Rome	2000 1000 500	May 20 June 4 June 30	May 14 May 28 June 11	Beulah Reservoir Bully Creek Owyhee Warmsprings	60.0 30.0 715.0 191.0	31.6 18.8 560.3 140.0	33.2 19.8 382.5 106.5	19.4 10.4 372.8 77.5

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

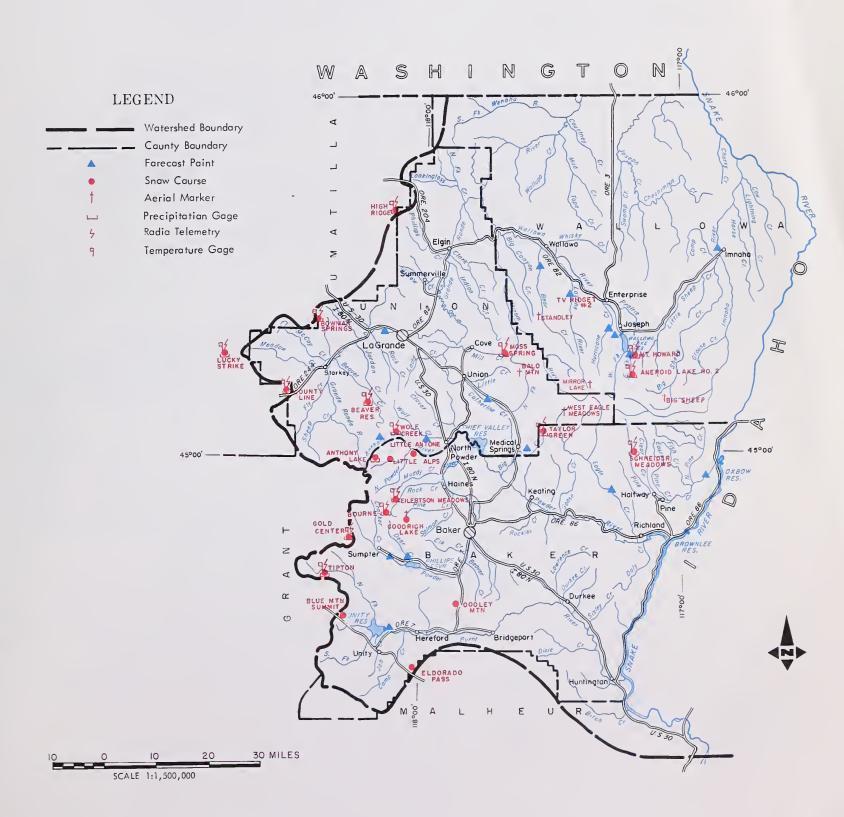
RIVER BASIN	Number of	THIS YEAR'S SNOW		
and/or	Courses	WATER AS PERCENT OF		
SUB-WATERSHED	Averaged	Last Year	Average C	
Jordan Creek	1	113	217	
Malheur River	4	105	179	
Owyhee River	4	128	184	

WATER SUPPLY OUTLOOK

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are forecast to be excellent. The snowpack is above average to much above average. Winter precipitation to date has been near normal. All reservoirs are storing above average amounts for January 1. Streamflow will range from about 110% to 150% in northeast Oregon.



STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
	FORE	CAST	FORECAST	THOUSAND ACRE FE	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Anthony Creek Blw. North Fork nr. North Powder Bear Creek near Wallowa, OR Big Creek Blw. Burn Creek nr. Medical Springs Burnt River near Hereford, OR Catherine Creek near Union, OR	22 70 15.7 54 93 71	127 106 127 150 145 112	FebJuly April-Sept. FebJuly FebJuly April-Sept. April-Sept.		17.3 65 12.3 36 64 64
Deer Creek abv. Phillips Lake nr. Sumpter, OR Eagle Creek abv. Skull Creek nr. New Bridge, OR Grande Ronde River at La Grande, OR Hurricane Creek near Joseph, OR	26 188 205 259 209 51	142 111 111 130 130 110	FebJuly April-July April-Sept. March-Sept. April-Sept. April-Sept.		18.3 b 169 184 199 161 46
Imnaha River at Imnaha, OR Lostine River near Lostine, OR Pine Creek nr. Oxbow Powder River near Sumpter, OR	335 132 262 82 87	110 110 107 110 144 151	April-Sept. April-Sept. April-Sept. FebJuly April-July April-Sept.		305 123 238 b 57 58
Wallowa River, East Fork near Joseph, OR Wallowa River at Joseph, OR Wolf Creek Res. net Inflow	14.2 12.6 76 16.0	110 110 110 121	FebSept. April-Sept. May-July March-june		12.8 11.5 69 13.2 b

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable	Usable Storage			
RESERVOIR	Capacity	This Year	Last Year	Average ^C	
Phillips Lake Thief Valley Unity Wallowa Lake Wolf Creek	73.5 17.4 25.2 37.5 10.4	55.5 17.5 16.2 27.5 4.9	43.8 17.6 12.9 20.9 3.0a	35.7b 15.4b 9.3 20.0	

SUMMARY of SNOW MEASUREMENTS

RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF	
SUB-WATERSHED	Averaged	Last Year	Average C	
Burnt River Grande Ronde River	4	104	170	
above La Grande Powder River Wallowa, Imnaha,	3 2	108 128	127 146	
Catherine Creek	-			

FORECAST DATE OF LOW FLOW VALUES								
FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value					
Eagle Cr.abv.Skull Cr. Catherine Cr.nr.Union Powder near Sumpter Deer Cr. abv. Phillips Res. nr. Sumpter	160 54 100 50 100 20	Aug. 2 Aug. 13 Aug. 1 July 14 Aug. 2 July 3 July 26 June 28 July 6	July 25 Aug. 5 Avg.value 49 July 9 July 28 June 25 July 22 June 17 July 6					

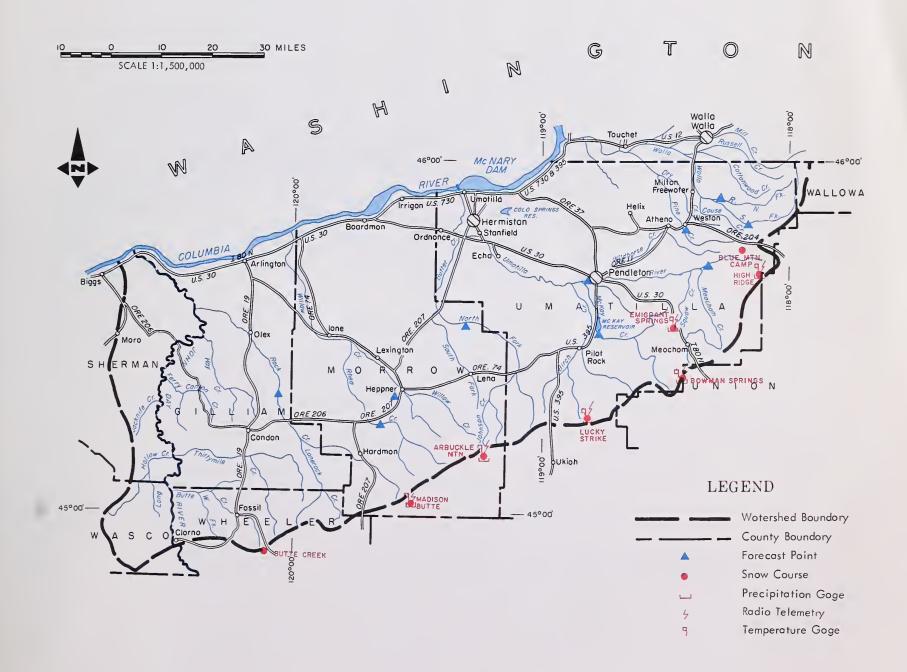
⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are forecast to be excellent. The snowpack is above to much above average. Winter precipitation has been slightly below average but cold temperatures have allowed a good snowpack to build in the mountains. Reservoir storage is above average for January 1.



TREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feer	Percent of Average	PERIOD	Last Year	Average C
Butter Creek nr. Pine City, OR	12.8	120	March-July		10.7
Couse Creek nr. Milton Freewater, OR	8.3	115	FebJuly		7.2
McKay Creek near Pilot Rock, OR	31	140	April-Sept.		22
Pine Creek near Weston, OR	6.6	115	FebJuly		5.7
Rhea Creek nr. Heppner, OR	9.3	115	FebJuly		8.1
Rock Creek abv. Cayuse Canyon nr. Condon, OR	25	118	FebJuly		21 b
Umatilla River abv. Meacham Cr., nr. Gibbon,OR	114	115	March-Sept.		99
	90	115	April-Sept.		78
Umatilla River at Pendleton, OR	235	115	March-Sept.		204
	172	115	April-Sept.		150
Walla Walla River, So. Fk. near Milton, OR	86	105	March-Sept		82
	73	105	April-Sept		69
Willow Creek at Heppner, OR	10.0	120	FebJuly		8.4

FUREGAST DATE OF LUW	FURECAST DATE OF LUW FLUW VALUES							
FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value					
Umatilla at Pendleton So. Fk. Walla Walla near Milton	550 200 103	May 29 June 13 AugSept. Min. flow	May 17 June 9 Avg.value 105					

RESERVOIR STORAGE (Thousand Ac Et) END

KESEKANIK SINKARE (II	iiousaiiu i	AC. PL.	END OF M	IONTH	
RESERVOIR	Usable	Usable Storage			
RESERVOIR	Capacity	This Year	Last Year	Average C	
Cold Springs McKay	50.0 73.8	19.7 42.0	20.0	17.9 20.9	

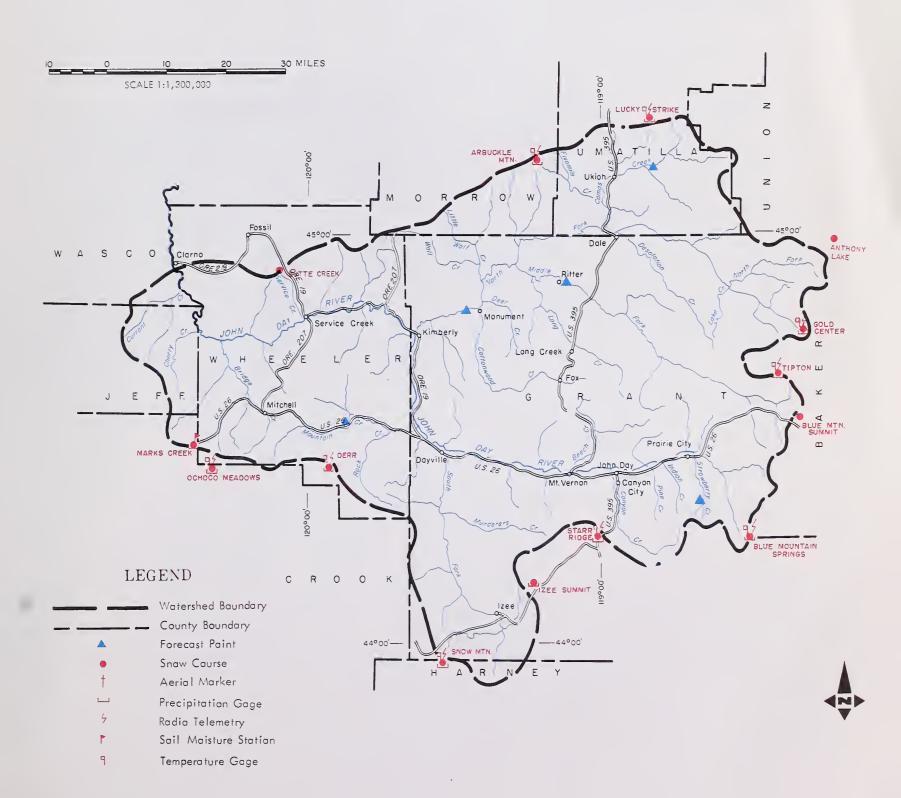
SUMMARY of SNOW MEASUREMENTS

RIVER BASIN and for SUB-WATERSHED MCKay Creek Umatilla River Walla Walla River Walla Walla River Water as percent of Courses Averaged Last Year Average C THIS YEAR'S SNOW WATER AS PERCENT OF Last Year Average C Last Year Average C 115 159 127 135 121	(COMPARISON WITH PREVIOUS YE	ARS)		
McKay Creek 2 115 159 Umatilla River 3 125 127	and or	Courses		
Umatilla River 3 125 127	SUB-WATERSHED	Averaged '	Last Year	Average C
	McKay Creek Umatilla River		115 125	159 127

WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are forecast to be excellent in the John Day basin. The mountain snowpack is 160 to 185% of average. Winter precipitation to date has been near average and cold temperatures have allowed the snowpack to build. Streamflows next spring and summer will be 120 to 150% of normal.



STREAMFLOW FORECASTS		THIS YEA	R	PAST	RECORD
	FORE	CAST	FORECAST	ST THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Camas Creek near Ukiah, OR John Day River, Middle Fork at Ritter, OR John Day River, Nol Fk. at Monument, OR Mountain Creek nr. Mitchell, OR Strawberry Creek abv. Slike Cr., nr.Prairie Cty	57 46 183 155 895 730 6.4 8.8 9.2	135 138 137 140 135 140 120 120	March-July April-Sept. March-July April-Sept. March-July April-Sept. FebJuly March-July April-Sept.		42 34 133 108 639 541 4.6 b 7.3 7.7

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

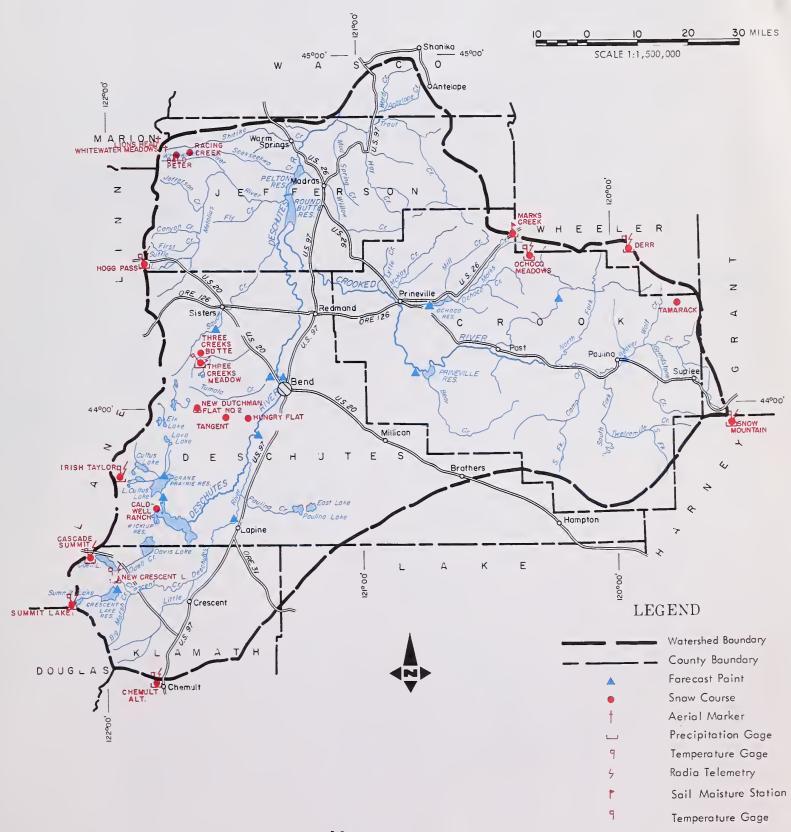
FORECAST POINT	Low Flow Value		Average Date of Low Flow	RIVER BASIN and/or	Number of Courses	THIS YE WATER AS	AR'S SNOW PERCENT OF
	Second/Ft.	Recede to Low Flow Value	Value	SUB-WATERSHED	Averaged	Last Year	Average C
John Day at Service Creek	255	Aug. 1	Avg.value 212	John Day, North Fork John Day abv. Dayville	5 3	117 96	183 159

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are forecast to be excellent next summer. For the second year in a row the mountain snowpack is above average. It ranges from 130 to 200% in the Deschutes basin. Winter precipitation has been near average to date. Reservoir storage is above average and all reservoirs should fill. Streamflow next summer will be very good as the snowpack melts and runs off.



TREAMFLOW FORECASTS		THIS YEA	R	PAST RECORD	
	FORE	CAST	FORECAST	THOUSAND	ACRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Beaver Creek near Paulina, OR	66	170	FebJuly		39
Crane Prairie Reservoir Totao Inflow	147	187 124	April-Sept.		16.1
Crescent Cr. at Crescent Lk. nr. Crescent, OR	28	136	April-Sept. March-July		120 20
or do daily drive dr do dreaden dr line dreaden dr	30	137	April-Sept.		22
Crooked River nr. Prineville, OR	278	172	FebJuly		161
	175	195	April-Sept.		90
Crooked R., No. Fk. blw. Lookout Cr. nr.Paulina		170	FebJuly		14.5
Deschutes River below Bend, OR		ASTED THIS			
Deschutes River at Benham Falls, nr. Bend, OR	422	115	April-July		360
Deschutes Divers him Committee Committee Committee	644	115	April-Sept.		560
Deschutes River blw. Snow Creek, nr. LaPine,OR	95	125	FebSept.		75
Deschutes River, Little near La Pine, OR	80	127	April-Sept.		63
describes kiver, Little hear La Fine, ok	134 98	131	FebJuly April-July		102 74
choco Reservoir net Inflow	60	205	FebJuly		29
	40	250	April-Sept.		16
quaw Creek near Sisters, OR	58	118	April-Sept.		49
umalo Creek near Bend, OR	54	119	April-Sept.		45

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

	Low Flow	Forecast Date Stream Will	Average Date	2555511012	Usable	Usable Storage		
FORECAST POINT	Value Second/Ft.	Recede to Low Flow Value	of Low Flow Value	RESERVOIR	Capacity	This Year	Last Year	Average C
Crane Prairie net Inflow Crooked R. near Post Deschutes below Bend Little Deschutes nr. La Pine Squaw Cr. nr. Sisters Tumalo Cr. nr. Bend	457 274 Peak 100 1500 400 200 100 235 207 150 71	Peak Oct. 31 May 26 June 20 Not F.C. this mo. June 12 July 15 Aug. 16 July 15 July 17 July 29 Aug. 20	June 1 July 1 June 7 July 15 Aug. 16 June 23 June 25 July 5 Aug. 7	Crane Prairie Crescent Lake Ochoco Prineville Wickiup	55.3 86.9 47.5 153.0 200.0	46.3 59.8 29.8 92.2a 189.6	31.7 22.9 29.4 92.7 104.0	41.2 51.9 20.6 97.8 134.4

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YE	ARS)		
RIVER BASIN	Number of		AR'S SNOW
and/or	Courses		PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average C
Crooked, Ochoco	1	77	219
Deschutes abv. Wickiup	1	80	132
Little Deschutes	2	113	181
Tumalo & Squaw Crs.	2	87	151

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

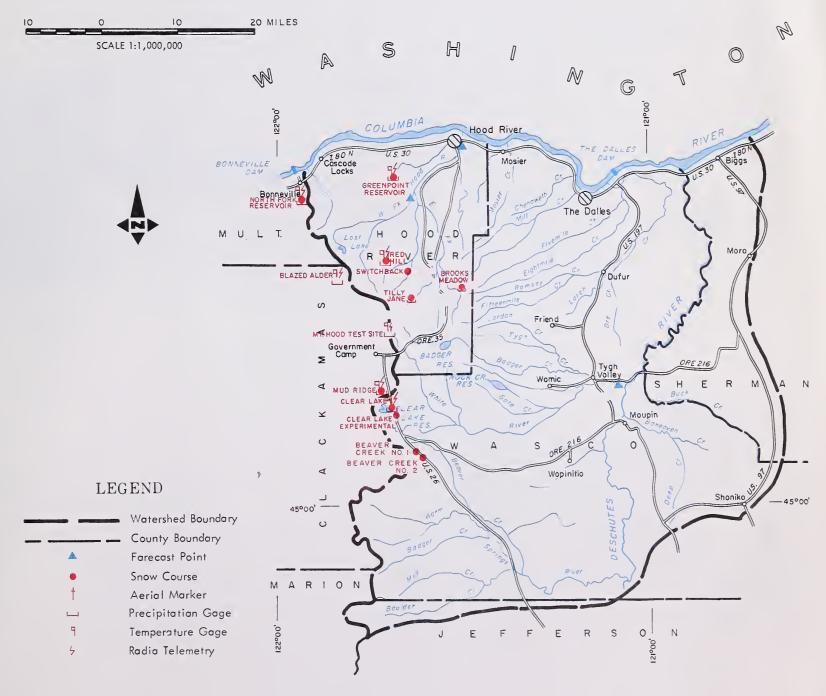
WATER SUPPLY OUTLOOK

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

GENERAL OUTLOOK

Water supplies are forecast to be near average. The mountain snowpack is slightly above average. Winter precipitation has been near average and warm temperatures in December brought rainfall and some melt and runoff of the snowpack. Streamflow next summer will be 110-115% of average.



STREAMFLOW FORECASTS		THIS YEAR	R	PAST	RECORD	
	FORECAST FORECAST			THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C	
Hood River at Tucker Bridge nr. Hood River Hood River, West Fork near Dee, OR White River below Tygh Valley, OR	263 308 145 167 131 148	105 114 112 115	April-July April-Sept. April-July April-Sept. April-July April-July April-Sept.		247 293 127 149 114 129	

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

UKECASI DATE UI LUW	ILOW TAL			KESEKANIK ZINKARE (II	iivusailu <i>i</i>	10. 11.	ENDOF	MUNIH
FORECAST POINT	Low Flow Value	Forecast Date Stream Will Recede to Low	Average Date of Low Flow	RESERVOIR	Usable Capacity		Usable Stor	
	Second/Ft.	Flow Value	Value		Capacity	This Year	Last Year	Average
Clear Branch Inflow *Average cfs forecast to flow for this two-week period.	*40	July 15-31	**39	Clear Lake (Wasco)	11.9	3.4	0.7	3.9
*Average cfs for period of record.								
hite blw. Tygh Valley	200	July 2	July 3					
	145	Aug. 1	Avg.value 145					
				SUMMARY OF SNOW ME (COMPARISON WITH PREVIOUS		ENTS	1	
				RIVER BASIN and/or	Numbe Cours		THIS YEA	R'S SNOW ERCENT O
				SUB-WATERSHED	Avera		ast Year	Average
				Hood River	3		67	104
				Mile Creeks	-			
				White River	3		67	104
	:							

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

GENERAL OUTLOOK

Streamflow for the Sandy River and the Columbia River at The Dalles will be normal this spring and summer. The mountain snowpack for the upper reaches of the Columbia are below to near normal. Oregon's snowpack which contributes to the Columbia River is above average except for the Mt. Hood area which is 104% of average.



SUMMARY of SNOW MEASUREMENTS

COMPARISON WITH PREVIOUS YEARS)

(COMPARISON WITH PREVIOUS TE	AKS)			
RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF	
SUB-WATERSHED	Averaged	Last Year		
Sandy River	2	70	103	

STREAMFLOW FORECASTS		THIS YEA	PAST RECORD		
	FOR	CAST	FORECAST	THOUSAND	ACRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Columbia River at The Dalles, OR Sandy River near Marmot, OR	89 104 329 384	100 100 100 100	April-July April-Sept. April-July April-Sept.		88 103 329 384

HISTORICAL DATA (Columbia River at The Dalles)

		STREAMFLOW d(1,000 A F)	REGULATED PEAK	
YEAR	APR — SEPT.	APR - JUNE	MAY - JUNE	(1,000cfs)	DATE
1963	87,860	58,499	47,812	437	June 18
1964	110,422	73,512	63,670	662	June 18
1965	114,222	80,098	62,467	520	June 9
1966	87,386	58,250	45,962	396	June 12
1967	109,319	74,378	66,452	622	June 10
1968	89,102	55,593	47,994	404	June 13
1969	112,377	85,742	63,899	515	May 15
1970	88,243	62,993	55,227	425	May 28
1971	126,898	91,781	76,453	557	May 13
1972	135,500	97,041	81,451	619	June 20
1973	65,549	43,765	36,565	221	December
1974	139,501	99,035	78,946	588	June 20
1975	108,906	73,018	62,861	422	May 17
1976	122,771	79,084	62,554	418	May 14
1977	54,108	35,505	28,394	213	January 2
963-77 Avg.	103,478	71,220	58,714	468	

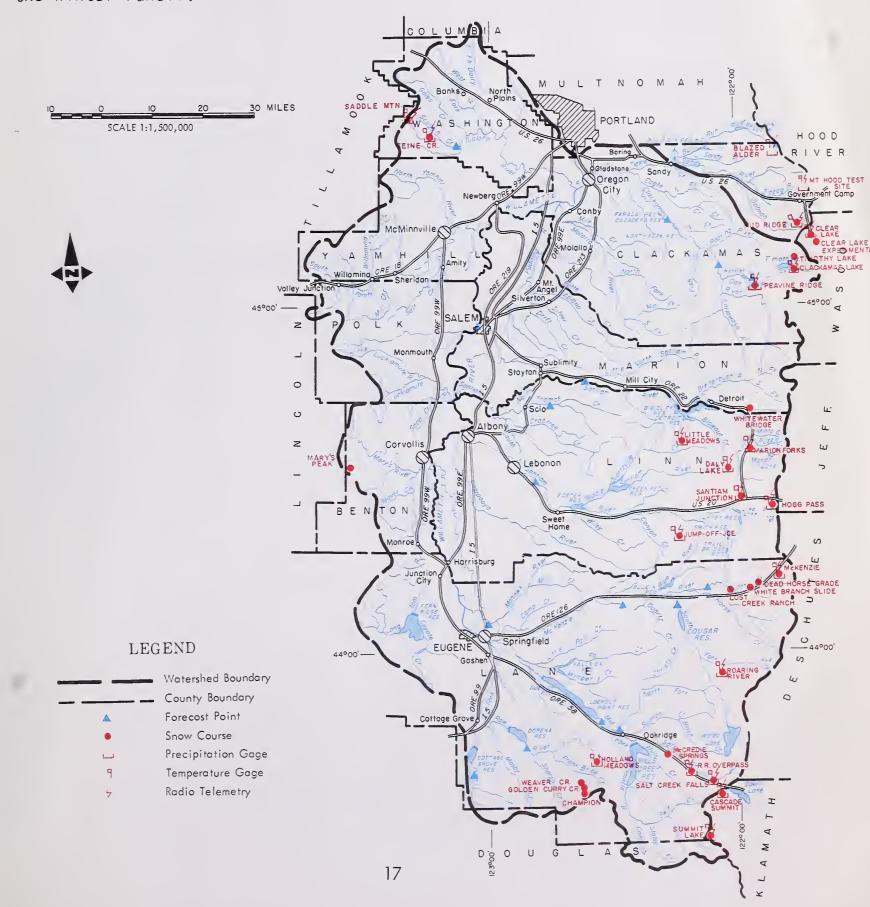
LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

				DRAINA	GE DISTRICT PUM	PHOUSE		
VANCOUVER	FLOW AT	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
GAGE (Weother Bu)	THE DALLES				RIVER MILES			
(Weginer Bu)	(1,000 c f s)	118.9	96. 0	91.0	77. 0	62.0	52.0	47. 0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

GENERAL OUTLOOK

The Willamette Valley should experience near average water supplies next summer. The mountain snowpack is near average on most streams. The winter precipitation to date has been near average. Warm temperatures during parts of December brought rains to the mountains causing some melt and runoff from the snowpack. The principal flood control reservoirs have been drawn down as usual to handle the winter runoff.



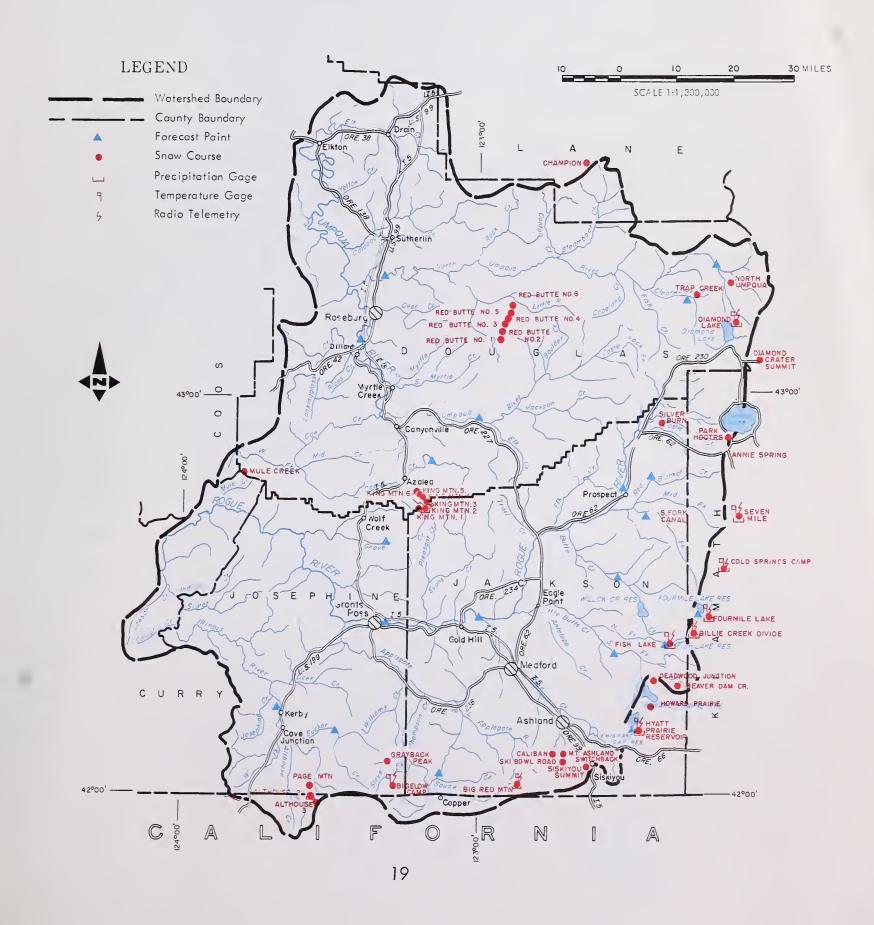
TREAMFLOW FORECASTS		THIS YEAR	,	PAST	RECORD
	FORECAST		FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average (
Clackamas River at Estacada, OR	734 860	110 110	April-July April-Sept.		667 782
Clackamas River abv. Three Lynx Creek, OR	557 663	110 110	April-July April-Sept.		506 603
McKenzie River at McKenzie Bridge, OR	455 604	101 101	April-July April-Sept.		452 598
McKenzie River near Vida, OR	1024 1259	100 100	April-July April-Sept.		1024 1259
McKenzie R., So.Fk.abv.Cougar L.,mr.Rainbow,OR	214 245	104 105	April-July April-Sept.		207
Mohawk River near Springfield, OR Oak Grove Fork above Powerplant Intake, OR	174 145 185	105 110 110	FebJuly April-July April-Sept.		166 132 168
Row River above Pitcher Creek near Dorena, OR	108 114	110 110	April-July April-Sept.		98 104
Santiam River, North at Mehama, OR	827 946	110 110	April-July April-Sept.		752 860
Santiam River, South at Waterloo, OR	602 649	110 110	April-July April-Sept.		547 590
Soggins Cr. abv. Henry Hagg Lake nr. Gaston, OR Thomas Creek near Scio, OR	46 176	105 110	FebJuly FebJuly		44 160
Willamette River, Coast Fork at London, OR Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	32 780 892	116 115 115	April-July April-July April-Sept.	779 906	27 678 776
Willamette, No. Fk. of Mid. Fk. near Oakridge	216 240	115 115 115	April-Sept. April-July April-Sept.	900	188
Willamette River at Salem, OR	5167	110	April-Sept.		4697

STIMMARY of SNOW MEASUREMENTS

COMPARISON WITH PREVIOUS YE	r	Tue ve					END OF 1			
RIVER BASIN and/or	Number of Courses	WATER AS PERCENT OF		Number of THIS YEAR'S SNOW WATER AS PERCENT OF		RESERVOIR	Usable		Isable Stora	age
SUB-WATERSHED	Averaged	Last Year	Average C	KESEKVOIK	Capacity	This Year	Last Year	Average C		
Clackamas River McKenzie River Row River Santiam River Willamette, Mid. Fk.	2 3 3 4 3	72 46 194 67 137	129 80 142 94 162	Blue River Cottage Grove Cougar Detroit Dorena Fall Creek Fern Ridge Foster Green Peter Hills Creek Lookout Point Timothy Lake Henry Hagg Lake * Multiple purpose reservoirspace reserved primarily for flood runoff.	85.6* 30.0* 155.2* 299.9* 70.5* 115.0* 94.2* 270.0* 270.0* 337.2* 61.7 53.0	53.6 32.0	6.7 0.4 23.2 43.4 10.4 19.1 8.1 0.1 51.0 87.4 147.7 56.2 32.8	1.1b 1.2 12.0b 31.6 4.4 0.0b 8.2b 0.5b 22.5b 14.5 29.2 52.4		

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON



STREAMFLOW FORECASTS		THIS YEA	?	PAST I	RECORD
	FORE	CAST	FORECAST	FORECAST THOUSAND ACRE	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Applegate River near Copper, OR Big Butte Cr.,So. Fk. nr. Butte Falls, OR Clearwater River abv. Trap Cr., nr.Toketee Falls Cow Creek nr. Azalea, OR Fourmile Lake net Inflow Grave Creek at Pease Bridge nr. Placer, OR Hyatt Reservoir net Inflow Illinois River near Kerby, OR Little Butte Cr.,N.Fk.at Fish Lk. nr. Lakecreek Little Butte Creek, s. Fk. nr. Lakedreek, OR Red Blanket Creek nr. Prospect, OR Rogue River above Prospect, OR Rogue River, So. Fork near Prospect, OR Rogue River at Taygold nr. Central Point, OR Rogue River at Grants Pass, OR Sucker Cr.blw.Little Grayback Cr.nr. Holland,OR Umpqua River, No. at Winchester, OR Umpqua River, So. near Brockway, OR Umpqua River, So. at Tiller, OR	45 6.7 23 7.5 193 199 17.5 46 41 306 74 89 901 1078 956 1099 72	126 112 104 105 171 110 152 110 109 125 136 115 119 120 120 119 117 125 120 125 100 104 110 115	April-Sept. April-July April-Sept. FebJuly April-Sept. Feb.July April-July April-July April-Sept. April-Sept. April-July		129 37 71 43 3.9 21 4.9 176 183 14.0 34 35 257 62 74 756 919 759 908 58 170 768 380 183

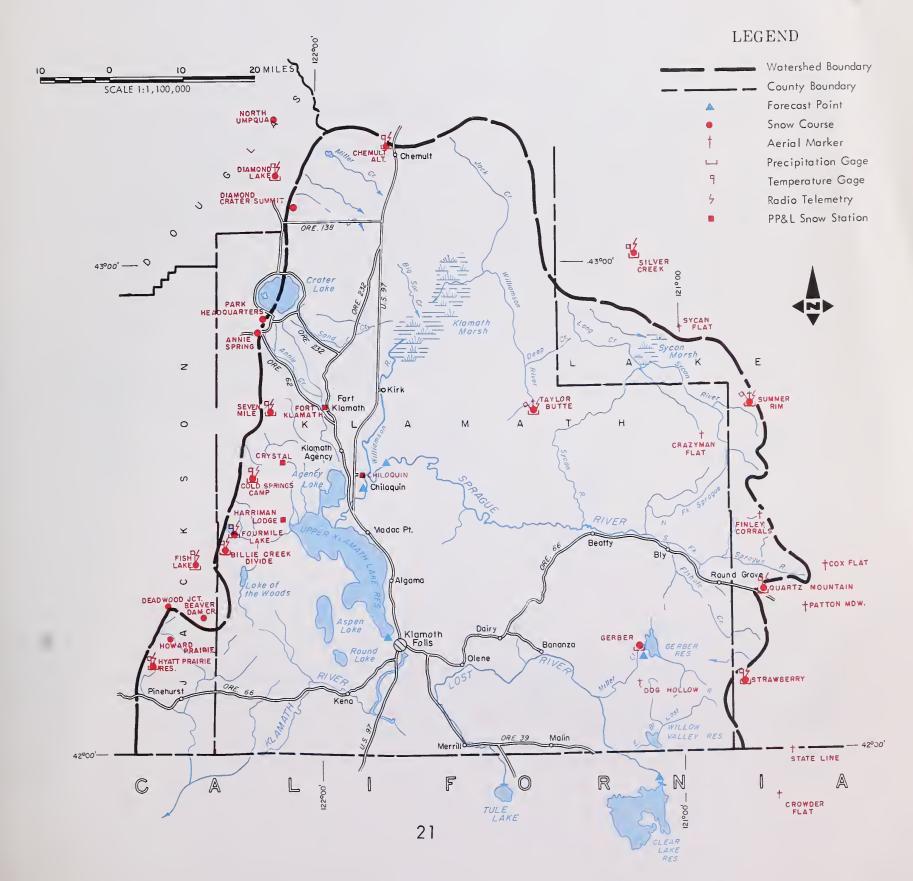
RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH	RESERVOIR	STORAGE	(Thousand Ac.	Ft.)	END OF MONTH
---	-----------	---------	---------------	------	--------------

Cow Creek nr. Azalea 20	ONEONO! DATE OF LOW	ILON TAL	0		MESERTOIN STORAGE (nousunu	NO. 11.)	ENU UF	MONTH
Cow Creek nr. Azalea	EORECAST POINT		Forecast Date Stream Will	Average Date	PESERVOIR	Usable	υ	sable Stora	age
Little Butte Creek, South Fork	FURECAST FUINT		Recede to Low		KESENVOIN	Capacity	This Year	Last Year	Average C
Applegate Bear Creek Illinois River North Umpqua 2 88 117	Little Butte Creek, South Fork South Umpqua near Brockway	10 100 90 140 90	Aug. 20 June 5 Aug. 20 July 14 Aug. 3	Aug. 19 May 15 July 30 July 10 July 30	Emigrant Lake Fish Lake Fourmile Lake Howard Prairie Hyatt Prairie	39.0 8.0 16.1 60.0 16.1	6.2 6.4 44.7	24.3 3.3 1.2 40.0 11.4	18.9 5.6 9.0b 41.7 10.9
Butte Creek Illinois River North Umpqua 2 88 117					RIVER BASIN and/or SUB-WATERSHED Applegate	Number Cours	er of WA	TER AS PE	
					Butte Creek Illinois River	2 3	8	88	

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies will be good to excellent in Klamath County this year. Streamflow is forecast to be 112% on the Williamson to 150% for the Gerber Reservoir inflow. The snowpack is excellent. The Williamson River watershed has a 190% of normal snowpack while the Sprague's watershed snowpack is 297%! Clear Lake and Gerber reservoir storage is greater than normal for this time of year. Upper Klamath Lake is presently slightly below normal but will have no problems in filling. The October-December period precipitation is 120% while December's amount was 149% of normal.



TREAMFLOW FORECASTS	THIS YEAR			PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average (
Clear Lake Reservoir Inflow Gerber Reservoir Inflow Sprague River near Chiloquin, OR Upper Klamath Lake net Inflow Williamson River blw.Sprague R., nr. Chiloquin	126 61 441 321 1081 698 665 475	137 150 128 132 120 130 112 116	FebJuly FebSept. April-Sept. FebSept. April-Sept. April-Sept. FebSept. April-Sept.		92 41 344 242 877 526 594 409	

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable	U	sable Stora	ge
KESEKVOIK	Capacity	This Year	Last Year	Average C
Clear Lake Gerber Upper Klamath Lake	440.2 94.0 584.0	272.3 66.2 313.7	174.8 47.1 398.9	203.2 46.0 350.7

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of		AR'S SNOW
and/or	Courses		PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average C
Lost River Sprague River Upper Klamath Williamson River	1	93	236
	2	446	297
	5	131	193
	3	152	190

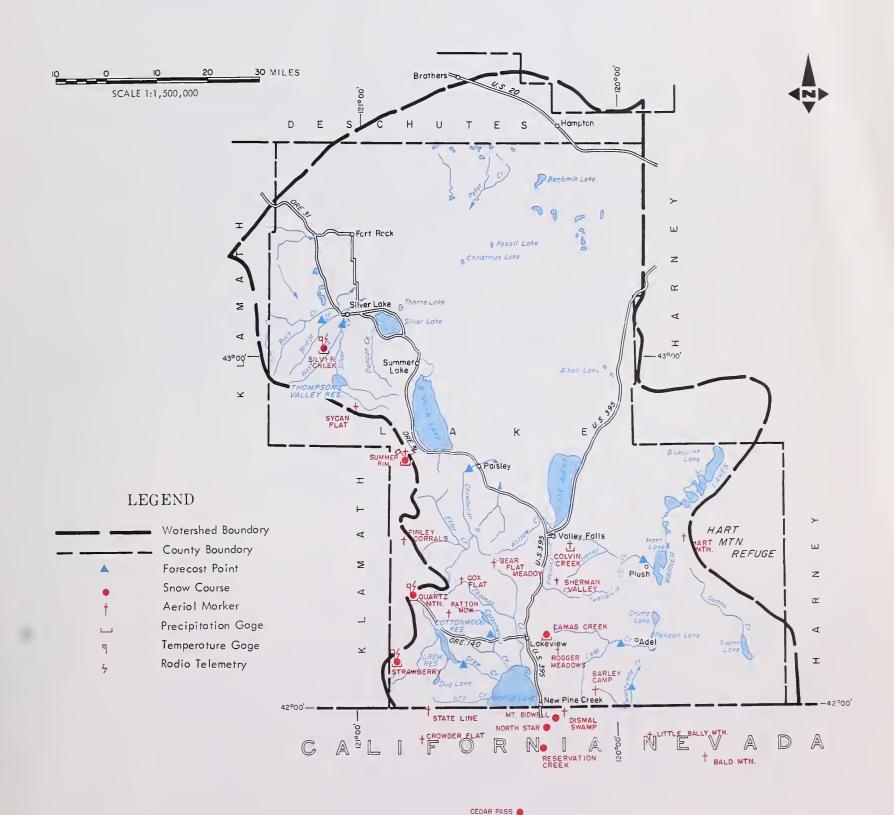
⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies will be excellent this summer in Lake County. The forecasted streamflow will be between 125% and 199% of normal. The snowpack is great! It ranges from 256% to 382% of average. The December precipitation was good in Lake County (125% of average) and the October-December period was 111%.



TREAMFLOW FORECASTS		THIS YEA	R	PAST	RECORD
	FORE	FORECAST		THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	FORECAST PERIOD	Last Year	Average
Bridge Cr. at Sphar Ranch nr. Silver Lake, OR Chewaucan River near Paisley, OR Cottonwood Creek nr. Lakeview, OR Deep Creek above Adel, OR Orews Reservoir net Inflow Honey Creek near Plush, OR Silver Creek near Silver Lake, OR Twentymile Creek near Adel, OR	6.7 128 18.5 100 64 33 28 40	196 145 159 125 155 161 199 152	April-July March-July March-July March-July March-July April-July March-July		3.4 88 11.6 80 41 21 14.1 26

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Deep Cr. above Adel Honey Cr. near Plush Twentymile near Adel	100 100 50 50	July 2 July 2 July 13 June 24	June 21 May 15 May 30 June 2

KEZEKANIK ZINKARE (nousand	AC. Ft.	END OF	MONTH		
RESERVOIR	Usable	U	Usable Storage			
RESERVOIR	Capacity	This Year	Last Year	Average ^C		
Cottonwood Drews Thompson Calley	8.7 63.0 19.5		7.0 41.1 4.0	2.1b 34.3 9.2b		

SUMMARY of SNOW MEASUREMENTS

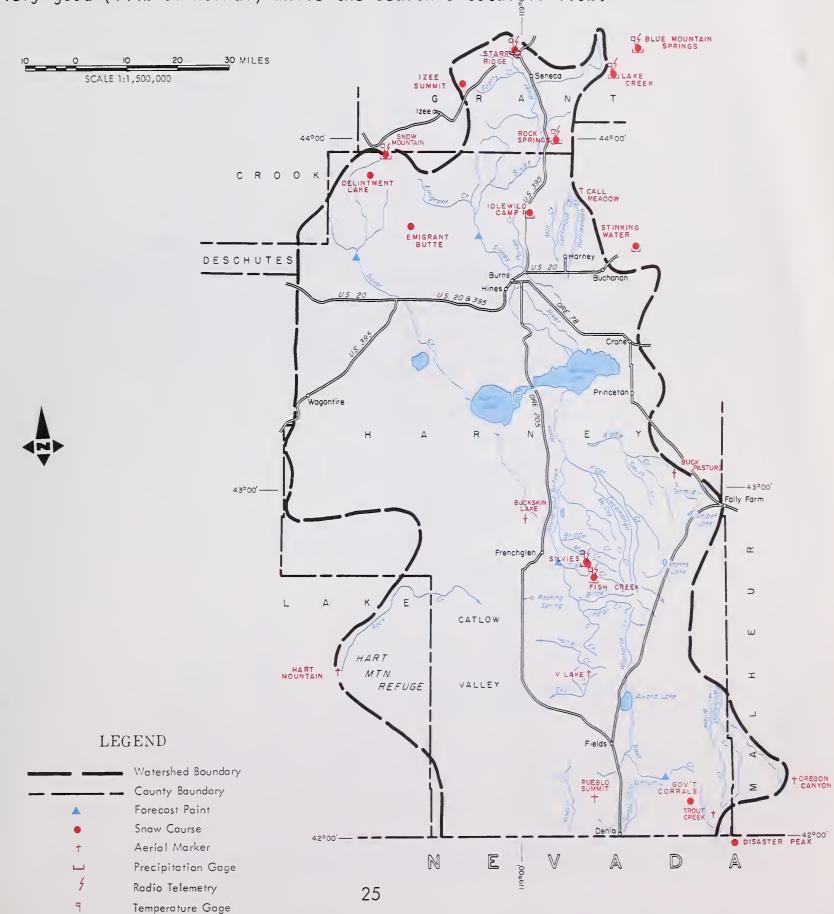
and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF			
SUB-WATERSHED	Averaged	Last Year	Average C		
Chewaucan River Deep Creek Drew Creek Honey Creek Silver Creek Twentymile Creek	2 1 1 2 -	446 272 457 272 616 	298 256 278 256 382 		

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

GENERAL OUTLOOK

Harney County will have an excellent water supply this summer. Streamflow, which is forecast to be much above average, ranges from 146% of average on the Silvies to 203% on Silver Creek. The snow cover is also excellent with about 180% of average on the ground as of January 1. The December precipitation was very good (144% of normal) while the season's totalsis 116%.



BASIN. STREAM and/or FORECAST POINT T A Donner und Blitzen River near Frenchglen, OR	FORE housand cre Feer	Percent of Average	FORECAST PERIOD	THOUSAND A	CRE FEET Average
	housand cre Feet		PERIOD	Last Year	Average
nnon und Blitzen Biver near Frenchalen OB					
ilver Creek near Riley, OR ilvies River near Burns, OR	92 86 32 146 113 14.8	155 152 203 152 146 159	March-July April-Sept. April-July March-July April-Sept. March-July		59 57 15.8 96 77 9.3

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

FURECAST DATE OF LUW	LLOM ANT	052		(COMPARISON WITH PREVIOUS YEARS)						
FORECAST POINT	Low Flow	i Stream Will i	Average Date of Low Flow	RIVER BASIN and/or	Number of Courses	WATER AS	AR'S SNOW PERCENT OF			
FORECAST POINT	Value Second/Ft.	Recede to Low Flow Value	Value	SUB-WATERSHED	Averaged	Last Year	Average C			
Silvies nr. Burns	400 . 200 100 50	May 15 June 11 June 28 July 5	May 5 May 21 June 9 June 23	Donner und Blitzen R. Silver Creek Silvies River Trout Creek	1 - 4 -	88 102 	187 172 			
Donner und Blitzen	200 100	July 6 July 31	June 15 July 5							
Malheur Lake at Break in Cole Island Dike near Voltage	GAGE HEIGHT	SURFACE ACRES	AVG. SURFACE ACRES							
July 1 Aug. 1	93.9 93.4	50,400 41,500	40,000	-						

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

Date of Survey 12/28 12/29 12/29 12/29 12/29 12/29	\$now Depth (In.) 18 e e e 46 e e e e	4.2 11.0 12.1 11.5 13.4	4.3 10.8 11.7	es)	BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS AREA 2 Aneroid Lake =2	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water C (Inc Last Yr.	hes)
12/29 12/29 12/29	0 0 0 4 1 6 1 0 0	11.0 12.1 11.5	10.8		RONDE, IMNAHA WATERSHEDS AREA 2 Aneroid Lake =2			12.4		
12/29 12/29 12/29	0 0 0 4 1 6 1 0 0	11.0 12.1 11.5	10.8		RONDE, IMNAHA WATERSHEDS AREA 2 Aneroid Lake =2			12 4		
12/29 12/29 12/29	0 0 0 4 1 6 1 0 0	11.0 12.1 11.5	10.8		Aneroid Lake =2	1/3		12 4		
12/29 12/29 12/29	e e 46 - 46 - e e	11.0 12.1 11.5	10.8	6 5		1/3		12 4		
12/29 12/29	e 46 46 e e	12.1 11.5	11.7	6.5		1/3		12 4		
12/29 12/29	46 46 e e	12.1 11.5	11.7	6.5	Aneroid Lake =2 Plw. (T)	-, -		13.4		
12/29	46 e e	11.5		0.0	Aneroid Lake #2 Plw. (S) Aneroid Lake #2 Plw. (M)		e e			
	e e			 e eb	Anthony Lake	12/29		12.0	11.3	11
	е		10.8	6.6b 5.4b	Bald Mountain (OR) *	10 /00	е			
	_				Beaver Reservoir (Rev.) Beaver Res. Pillow (T)	12/28	30	6.1	6.8	
					Beaver Res. Pillow (S)	12/28	26	5.8	5.2	
	e				Beaver Res. Pillow (M) Big Sheep *	12/28		5.0		
	e				Blue Mtn. Summit (DISC.82)	1/1	е	6.3a	7.4	3
	e				Bourne		е			
	e				Bourne Pillow (T)	1/2		11.5	10.0	
	2				Bourne Pillow (M)		e			
12/28		2.0	3.2	2.0	County Line (Rev.)			2.5		1
1/3		23.1			County Line Pillow (M)	,	1.0	N/R		1
						12/20	e 3/4	7 2	E 1	4
	e				Eilertson Meadows Plw. (T)			7.0	5.7	
1/1	e 10-	1 2-		2 2	Eilertson Meadows Plw. (S)	12/28	31	6.9	6.5	
		_					12			
-/ -	е	0.00			Gold Center		34	8.0		
	е				Gold Center Pillow (T)	12/28		6.3	5.5	
	e						-			
	е					12/20	e	0.5]	
					Little Alps	12/29	34	7.2		
12/28	27	8.3	7.2	4.2						
12/29		10.4	9.7		Lucky Strike Pillow (T)	12/29	=-	8.3	5.0	
	1			1				6.3		
12/23	е	10.7	3.0			12/29		8.4	4./	
	e				Moss Spring		e			
						1/1		10.3		
	e						e			
12/20	e 10	1 1 1	5.2		Mt. Howard Pillow (T)	1/1		6.0	6.0	
12/20	e 13	7.7	5.2				-		5	
	е				Schneider Meadow		e			
12/20	e 23	5.2	4.0	2 1	Schneider Meadow Plw. (T)	1/1		21.1	14.8	
12/29		4.8	5.0				e			
12/29	23	6.0	4.8		Standley *		е			
	16a			2.8		1/1	e	11 7	10 1	
-/-	e					1/1	е	122.7	10.1	
	e				Taylor Green Pillow (M)	10.00	e	0.0		
	e									
1/1		13.9			Tipton Pillow (S)	12/28	38	8.3	9.9	6
	e				Tipton Pillow (M)	12/28		10.7	8.4	
12/29	38	11.3	10.0	4.6			e			
1/1		14.0			Wolf Creek Pillow (T)			10.0	9.4	
12/20		2.8	3.2	1.5						
	е				NOTI CIEEK PITTON (M)	12/20		10.0		
12/29	20	5.1	3.0	2.0						
12/29	e 9	1.9	1.8	1.05						
12,23	e									
	е									
	e									
	1/1 1/4 12/28 12/29 12/29 12/29 12/29 1/1 1/1 1/1 1/1 1/2/29 12/29 12/29	12/28 13 e e e e e e e e e	12/28 13 2.0 e 1/3 e e e e e e e e e	12/28 13 2.0 3.2 1/3 23.1 e e e e e e e e 1/1 18a 4.2a 1/4 13 3.0a e e e e e e e e e e e	12/28	12/28	12/28	12/28	12/28	12/28 13

NOW	T	HIS YEAR	3	PAST R		SNOW	T	HIS YEA	R	PAST R	ECORD
DRAINAGE BASIN and/ar SNOW COURSE	Date af Survey	Snow Depth (In.)	Water Cant . (In .)	Water (Inch	es)	DRAINAGE BASIN and/ar SNOW COURSE	Date af Survey	Snaw Depth (In.)	Water Cont. (In.)	Water (Inc.	hes)
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS AREA 3						UPPER DESCHUTES, CROOKED WATERSHEDS AREA 5					
Arbuckle Mountain Arbuckle Mountain Plw.(T) Arbuckle Mountain Plw.(S)	12/29 12/27 12/29	32 47	8.1 15.9 11.6	4.4 11.1 9.5		Bald Peter Beaver Creek #1 Beaver Creel #2 Caldwell Ranch (DISC. 82)	12/28 12/29 12/29	64 26 22 e	16.8 5.7 4.5		13.1b
Arbuckle Mountain Plw.(M) Blue Mountain Camp(DISC.82 Bowman Springs Plw. (T) Bowman Springs Plw. (S) Bowman Springs Plw. (M) Butte Creek Summit Emigrant Springs Emigrant Springs Plw. (T) Emigrant Springs Plw. (S)	12/27 1/1 12/29 12/29 12/29	 23 REPORT 18 17	15.4 8.5a 7.0 5.0 5.7	11.8 6.0 6.2 4.5 6.1 4.7 3.9 3.8	6.2	Cascade Summit Cascade Summit Plw.(T) Cascade Summit Plw.(S) Cascade Summit Plw.(M) Chemult Alternate Chemult Alt. Plw. (T) Chemult Alt. Plw. (S) Chemult Alt. Plw. (M) Derr	12/29 12/29 12/29 12/29 1/3 1/3 1/3 1/3	53 60 32 30 e	20.3 15.0 22.3 14.3 8.7 7.0 9.3 6.7	16.4 18.6 19.0 18.0 9.3 9.5 9.2	11.1 4.9b
Emigrant Springs Plw. (M) High Ridge Pillow (T) High Ridge Pillow (S) High Ridge Pillow (M) Lucky Strike Lucky Strike Pillow (T)	12/29 1/3 1/3 1/3 12/29 12/29	56 26	5.6 16.3 16.4 16.5 6.3 8.3	4.6 12.8 12.4 12.3 4.0	 14.4 	Derr Pillow (T) Derr Pillow (S) Derr Pillow (M) Hogg Pass Hogg Pass Pillow (T) Hogg Pass Pillow (S)	1/3 12/28 12/28 12/28	e e 56 63	13.9 17.4 15.0 19.0	12.3 23.0 24.8 24.2	
Lucky Strike Pillow (S) Lucky Strike Pillow (M) Madison Butte Pillow (T) Madison Butte Pillow (S) Madison Butte Pillow (M)	12/29 12/29 12/29 12/29 12/29	27 20 	6.3 8.4 5.9 5.4 3.8	4.0 4.7 3.6 2.6 3.7	 	Hogg Pass Pillow (M) Hungry Flat Irish-Taylor Pillow (T) Irish-Taylor Pillow (S) Irish-Taylor Pillow (M) Lionshead *	12/28 1/4 1/3	18 e e REPOR	14.9 4.9 16.3	24.7 3.1 24.2	
UPPER JOHN DAY WATERSHEDS AREA 4						Marks Creek New Crescent Lake New Crescent Lake Plw. (T)	1/5	16 e	4.6	6.0 9.8	2.1
Anthony Lake Arbuckle Mountain Arbuckle Mtn. Plw. (T)	12/29 12/29 12/27	46 32	12.0 8.1 15.9	11.3 4.4 11.1	11.1 	New Crescent Lake Plw. (S) New Crescent Lake Plw. (M) New Dutchman Flat #2	1/4	e e 91	29.6	37.0	
Arbuckle Mtn. Plw. (S) Arbuckle Mtn. Plw. (M) Blue Mountain Springs Blue Mtn. Spgs. Plw. (T)	12/29 12/27 12/29 12/29	47 46 	11.6 15.4 11.0 12.1	9.5	 6.5	Ochoco Meadows Plw. (T) Ochoco Meadows Plw. (S) Ochoco Meadows Plw. (S) Ochoco Meadows Plw. (M)	12/31	e e e	7.7		
Blue Mtn. Spgs. Plw. (S) Blue Mtn. Spgs. Plw. (M) Blue Mountain Sum.(DISC.82 Butte Creek Summit	12/29 12/29	46 REPORT	11.5 13.4 6.3a	11.0 10.8	6.6b 5.4b	Racing Creek Snow Mountain Snow Mountain Plw. (T) Snow Mountain Plw. (S)	12/28		7.6 8.5	7.2	3.9
Derr Derr Pillow (T) Derr Pillow (S) Derr Pillow (M)	1/3	e e e	13.9	12.3		Snow Mountain Plw. (M) Summit Lake Pillow (T) Summit Lake Pillow (S) Summit Lake Pillow (M)	1/1	e e e	17.3		
Gold Center Gold Center Plw. (T) Gold Center Plw. (S) Gold Center Plw. (M)	12/28 12/28 12/28 12/28	34 30	8.0 6.3 6.4 6.3	6.8 5.5 6.4 5.5		Tamarack (DISC.82) Tangent Three Creek Butte Three Creek Meadow	1/4	e 56 e e	18.2	18.0	9.2
Izee Summit (DISC.82) Lucky Strike Lucky Strike Plw. (T) Lucky Strike Plw. (S) Lucky Strike Plw. (M) Marks Creek	1/1 12/29 12/29 12/29 12/29 1/5	26 27 16	4.6a 6.3 8.3 6.3 8.4 4.6	5.4 4.0 5.0 4.0 4.7 6.0	 	Three Creek Mdw. Plw. (T) Three Creek Mdw. Plw. (S) Three Creek Mdw. Plw. (M) Whitewater Meadow *	LATE	e e REPOR	9.6	13.3	
Ochoco Meadows Ochoco Meadows Plw. (T) Ochoco Meadows Plw. (S) Ochoco Meadows Plw. (M)	12/31	e e e	7.7								
Snow Mountain (DISC.82) Snow Mtn. Plw. (T) Snow Mtn. Plw. (S)	1/1	e e	8.5	7.2	3.9b						
Snow Mtn. Plw. (M) Starr Ridge Starr Ridge Plw. (T) Starr Ridge Plw. (S) Starr Ridge Plw. (M) Tipton Tipton Pillow (T) Tipton Pillow (S) Tipton Pillow (M)	12/29 1/3 1/3 1/3 12/28 12/28 12/28 12/28	e 21 23 34 38	4.0 6.2 5.5 7.0 8.3 10.3 8.3 10.7	4.2 4.9 4.4 5.3 7.4 9.2 9.9 8.4	4.7 6.6b						

	Date	Snow	1 147 4	Woter	ontent						
AINAGE BASIN and/or SNOW COURS	1 -	Depth (In.)	Water Cont. (In.)	(Inc		DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water C (Incl Last Yr.	
OOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS						WILLAMETTE WATERSHEDS(CONT. Daly Lake Plw. (T))				
AREA 6 rooks Meadow lear Lake lear Lake Pillow (T) lear Lake Pillow (S) lear Lake Pillow (M) lear Lake Expt. reenpoint reenpoint Pillow (T) reenpoint Pillow (S) reenpoint Pillow (M)	12/30 12/30 12/30 1/3 12/30 1/3	e 15 27 25 e e e	3.8 6.6 6.1 6.5 5.7	5.8 9.7 10.4 11.1	3.3	Daly Lake Plw. (1) Daly Lake Plw. (S) Daly Lake Plw. (M) Dead Horse Grade Golden Curry Creek(DISC.82) Hogg Pass Hogg Pass Pillow (T) Hogg Pass Pillow (S) Hogg Pass Pillow (M) Holland Meadows Plw. (T) Holland Meadows Plw. (S) Holland Meadows Plw. (M)	12/27 12/27 12/27 1/3 1/1 12/28 12/28 12/28 12/28 12/27 12/27	21 11 56 63 49	5.7 5.8 5.4 3.4 1.7a 17.4 15.0 19.0 14.9 13.8 14.3	9.4 9.3 1.0 23.0 24.8 24.2 24.7 10.8	6. 2. 14.
igh Prairie t. Hood Test Site (T) t. Hood Test Site (S) t. Hood Test Site (M) ud Ridge Pillow (T) ud Ridge Pillow (S) ud Ridge Pillow (M) ed Hill ed Hill Pillow (T) ed Hill Pillow (S) ed Hill Pillow (M) witchback (DISC.82)	LATE 12/28 12/28 12/28 12/30 12/30 12/30	78 38 6 e e e e	25.5 25.0 22.4 8.9 9.3 5.6	32.9 32.0	11.0	Jump Off Joe Pillow (T) Jump Off Joe Pillow (S) Jump Off Joe Pillow (M) Little Meadows Plw. (T) Little Meadows Plw. (S) Little Meadows Plw. (M) Lost Creek Ranch (DISC.82) Marion Forks Marion Forks Pillow (T) Marion Forks Pillow (S) Marion Forks Pillow (M) Marys Peak	12/30 12/30 12/30 12/27 12/27 12/27 1/1 12/28 12/28 12/28 12/28	19 32 9 11 e	5.2 4.9 5.0 9.4 9.1 8.3 0.8a 2.0 3.2 2.3 2.9	12.9 15.2 5.4 5.2	1.4.
illy Jane (DISC.82) OWER COLUMBIA WATERSHED AREA 7 lazed Alder Pillow (T) lazed Alder Pillow (S) lazed Alder Pillow (M) t. Hood Test Site (T) t. Hood Test Site (S) t. Hood Test Site (M) ud Ridge Pillow (T) ud Ridge Pillow (S) ud Ridge Pillow (S) orth Fork Res. (T) orth Fork Res. (M)	12/28 12/28 12/28 12/28 12/28 12/28 12/30 12/30 12/30 12/28 12/28	e - 36 78 38 21	11.3 11.0 10.2 25.5 25.0 22.4 8.9 9.3 5.6 6.6 5.6	32.9 32.0	11.0	McCredie Springs (DISC.82) McKenzie McKenzie Pillow (T) McKenzie Pillow (S) McKenzie Pillow (M) Mt. Hood Test Site (T) Mt. Hood Test Site (S) Mt. Hood Test Site (M) Peavine Ridge Pillow (T) Peavine Ridge Pillow (S) Peavine Ridge Pillow (M) Railroad Overpass Railroad Overpass Plw. (T) Railroad Overpass Plw. (S) Railroad Overpass Plw. (M) Roaring River Plw. (T) Roaring River Plw. (S) Roaring River Plw. (M) Saddle Mtn. Pillow (T)	1/1 1/3 1/3 1/3 12/28 12/28 12/28 12/28 12/28 12/28 12/28 12/29 12/29 12/29 12/29 12/29 12/27 12/27 12/27	53 54 78 22 4 0 46 	0.4a 17.4 22.4 17.3 21.8 25.5 25.0 22.4 7.2 6.0 7.1 0.8 0.0 0.0 15.7 13.1 14.7 5.8	34.0 23.5 29.3 28.3 33.2 32.9 32.0 8.9 0.5 1.0 0.6 15.0	0 19
WILLAMETTE WATERSHEDS AREA 8 ascade Summit ascade Summit Plw. (T) ascade Summit Plw. (S) ascade Summit Plw. (M) hampion (DISC.82) lackamas Lake lackamas Lake Plw. (T) lackamas Lake Plw. (S) lackamas Lake Plw. (M) lear Lake lear Lake Plw. (T) lear Lake Plw. (S) lear Lake Plw. (M) lear Lake Plw. (M)	12/29 12/29 12/29 12/29 1/1 1/3 12/30 12/30 1/3 12/30	53 	20.3 15.0 22.3 14.3 19.1a 4.8 6.6 6.1 6.5 5.7	18.6 19.0 18.0	3.3	Salt Creek Falls Salt Creek Falls Plw. (T) Salt Creek Falls Plw. (S) Salt Creek Falls Plw. (M) Santiam Junction Santiam Junction Plw. (T) Santiam Junction Plw. (S) Santiam Junction Plw. (M) Seine Creek Pillow (T) Summit Lake Pillow (T) Summit Lake Pillow (S) Summit Lake Pillow (M) Timothy Lake Weaver Creek (DISC.82) White Branch Slide(DISC.82) Whitewater Bridge (DISC.82)	12/29 12/29 12/29 12/29 12/28 12/28 12/28 12/28 12/29 1/1	27 	8.0 12.3 11.8 11.4 8.6 10.4 9.0 9.2 0.5 17.3	3.8 8.3 8.2 7.9 13.1 13.4 12.8 13.6 1.6	5
rear Lake Expt.	12/30	23	3.7	10.4	J. 1						

SNOW	T	HIS YEA	R	PAST R	ECORD	SNOW	Т	HIS YEA	R	PAST R	ECORD
DRAINAGE BASIN and/or SNOW COURSE	Date of	Snow Depth	Water Cont.	Water (Incl	es)	DRAINAGE BASIN and/or SNOW COURSE	Date of	Snow Depth	Water Cont.	Water C (Incl	nes)
,	Survey	(ln.)	(ln.)	Last Yr.	Ave.		Survey	(In.)	(ln.)	Last Yr.	Ave. c
ROGUE, UMPQUA WATERSHEDS AREA 9						KLAMATH WATERSHEDS AREA 10					
Althouse #2 Althouse #3		e				Annie Spring Billie Creek Divide	1/2 12/30	84 53	27.3 15.0	34.1 11.9	17.6 8.6
Annie Spring	1/2	84	27.3	34.1	17.6	Billie Cr. Div. Plw. (T)	12/30		12.1	12.2	
Beaver Dam Creek Bigelow Camp Plw. (T)	1/7 1/3	36	13.9	4.1	6.1	Billie Cr. Div. Plw. (S) Billie Cr. Div. Plw. (M)	12/30 12/30	56 	15.5 11.5	12.1 11.5	
Bigelow Camp Plw. (S)	-/ 0	е		0.,		Chemult Alternate	1/3	32	8.7	9.3	4.9
Bigelow Camp Plw. (M) Big Red Mountain		e				Chemult Slternate Plw. (T) Chemult Alternate Plw. (S)	1/3	30	7.0	9.5	
Big Red Mtn. Plw. (T)	1/3		20.6			Chemult Alternate Plw. (M)	1/3		6.7	9.2	
Big Red Mtn. Plw. (S) Big Red Mtn. Plw. (M)		e				Chiloquin (PP&L) Cold Springs Camp	1/3	8 e	2.0	1.9	
Billie Creek Divide Billie Cr. Div. Plw. (T)	12/30 12/30	53	15.0 12.1	11.9	8.6	Cold Spgs. Camp Plw. (T)	1/3		21.8	17.1	
Billie Dr. Div. Plw. (S)	12/30	56	15.5	12.1		Cold Spgs. Camp Plw. (S) Cold Spgs. Camp Plw. (M)		e			
Billie Cr. Div. Plw. (M) Caliban (Alternate)	12/30	e	11.5	11.5		Crazyman Flat * Crowder Flat (Calif.) *		e e			
Champion (DISC.82)	1/1		19.1a	9.7	12.4	Crystal (PP&L)	1/3	17	5.5	2.8	4.1
Cold Springs Camp Cold Spgs. Camp Plw. (T)	1/3	e	21.8	17.1		Diamond-Crater Sum(DISC.82) Dog Hollow *	1/1	 e	16.1a	13.9	11.7
Cold Spgs. Camp Plw. (S)	1 2/ 0	е				Finley Corrals *		е			
Cold Spgs. Camp Plw. (M) Deadwood Junction	1/7	9 30	10.2	2.0	4.3b	Fort Klamath (PP&L) Fourmile Lake	1/3 12/30	14 62	4.0	3.2	1.8
Diamond-Crater Sum. (DISC.8%	2) 1/1 12/28	44	16.1a 12.1	13.9	11.7	Fourmile Lake Plw. (T)	12/30	 71	16.9	18.9	
Diamond Lake Diamond Lake Plw. (T)		44	N/R	4.2		Fourmile Lake Plw. (S) Fourmile Lake Plw. (M)	12/30 12/30	71	19.9		
Diamond Lake Plw. (S) Diamond Lake Plw. (M)	12/28	44	13.2 N/R	6.5		Gerber Harriman (PP&L)	1/3	10 14	2.6	2.8	1.1
Fish Lake	12/30	34	10.0	3.8	5.5b	Howard Prairie	1/7	32	10.5	1.8	4.0
Fish Lake Pillow (T) Fish Lake Pillow (S)	12/30 12/20	37	10.5	4.4		Hyatt Prairie Reservoir Hyatt Prairie Res. Plw. (T)	1/7	32	11.6	2.2	4.0
Fish Lake Pillow (M)	12/30		9.9	4.0		Hyatt Prairie Res. Plw. (S)	1/4	41	13.3		
Fourmile Lake Fourmile Lake Pillow (T)	12/30 12/30	62	19.0	18.9		Hyatt Prairie Res. Plw. (M) Park Headquarters	1/4	105	9.6	2.8	25.2
Fourmile Lake Pillow (S)	12/30	71	19.9			Quartz Mountain	12/29	29	6.4	1.4	2.3
Fourmile Lake Pillow (M) Grayback Peak	12/30	е	15.5			Quartz Mountain Plw. (T) Quartz Mountain Plw. (S)	12/31 12/29	30	8.6	1.9	
Howard Prairie Reservoir Hyatt Prairie	1/7	32	10.5	1.8	4.0	Quartz Mountian Plw. (M)	12/31		7.5	1.8	
Hyatt Prairie Pillow (T)	1/4		9.6	3.3		Seven Mile Seven Mile Pillow (T)	12/29	e 	16.9		
Hyatt Prairie Pillow (S) Hyatt Prairie Pillow (M)	1/4 1/4	41	13.3	2.8		Seven Mile Pillow (S) Seven Mile Pillow (M)		e e			
King Mountain #1	12/28	32	9.9	2.2	5.7b	State Line (Calif.) *		e			
King Mountain #2 King Mountain #2 Plw. (T)	12/28	29	9.3	2.3	3.6b	Strawberry Strawberry Pillow (T)	12/30	e	6.3	2.3	
King Mountian #2 Plw. (S)	12/28	28	9.0	2.6		Strawberry Pillow (S)	12,00	е			
King Mountain #2 Plw. (M) King Mountain #3	12/28	8	7.7	1.4	1.9b	Strawberry Pillow (M) Summer Rim *		e			
King Mountain #4	12/28	3 0	0.4	0.0	0.2b	Summer Rim	1/1	е	12.5	12.2	
King Mountian #5 King Mountain #6	12/28	0	0.0	0.0	0.1b 0.1b	Summer Rim Pillow (T) Summer Rim Pillow (S)	1/1	 e	13.5	13.3	
Mt. Ashland Switchback Mule Creek	12/28	e 14	4.6	1.6	4.6b	Summer Rim Pillow (M) Sycan Flat *		e			
North Umpqua	12/30	21	3.8		6.4	Taylor Butte	12/29	24	6.1	1.4	1.9
Page Mountain Park Headquarters	1/2	e 105	36.0	43.4	25.2	Taylor Butte Pillow (T) Taylor Butte Pillow (S)	12/29 12/29	26	4.8		
Red Butte #1	12/27	34	8.7	3.2	5.2b	Taylor Butte Pillow (M)	12/29		4.4	2.9	
Red Butte #2 Red Butte #3	12/27 12/27	25 10	6.2	1.2	3.0 1.8b						
Red Butte #4 Red Butte #5	12/27 12/27	5	1.0	1.0	1.1b						
Red Butte #6	12/27	0	0.0	0.0	0.4b						
Seven Mile Seven Mile Pillow (T)	12/29	e 	16.9								
Seven Mile Pillow (S)		е	33.5								
Seven Mile Pillow (M) Silver Burn	1/4	e 29	9.1	4.0	6.1						
Siskiyou Summit		е									
Ski Bowl Road South Fork Canal	1/3	e 3	0.5	4.0	2.0						
Trap Creek	12/30	16	3.2	5.0	5.6						

DANNOL MAIN-and/or SNOW COURT Some Name Nam	SNOW	T	HIS YEA	R	PAST R	ECORD	SNOW		HIS YEA	R	PAST RI	CORD
### AREASHEDS AREA 12 Adin Mountain (Calif.)	DRAINAGE BASIN ond/or SNOW COURSE	of	Depth	Cont.	(Incl	nes)	DRAINAGE BASIN and/or SNOW COURSE	of	Depth	Cont.	(Inch	es)
N/R No Report TR Trace T = Telemetry Measurement S = Snow Tube Measurement M = Manometer Measurement (DISC.##) = Snow course manual measurement discontinued in year shown-estimates to be	WATERSHEDS AREA 11 Adin Mountain (Calif.) Bald Mountian (Nev.) Barley Camp * Bear Flat Meadow * Camas Creek #1 Camas Creek #2 Cedar Pass (Calif.) Colvin Creek * Cox Flat * Crowder Flat (Calif.) * Dismal Swamp (Calif.) * Dismal Swamp #2 Plw. (T) Dismal Swamp #2 Plw. (S) Dismal Swamp #2 Plw. (M) Finley Corrals * Hart Mountain * Little Bally Mtn. (Nev.) Mt. Bidwell (Calif.) North Star (Calif.) Patton Meadows * Quartz Mountain Plw. (T) Quartz Mountain Plw. (S) Quartz Mountain Plw. (S) Quartz Mountain Plw. (S) Silver Creek Silver Creek Plw. (T) Silver Creek Plw. (S)	12/28 1/1 12/29 12/29 12/29 12/30 12/30 12/30	e e e e e e e e e e e e e e e e e e e	11.2 16.1 16.1 6.4 8.6 7.2 7.5 5.0 10.5 11.0 N/R	1.4 1.9 1.6 1.8 0.4 9.8a 9.8	2.3	Blue Mountain Springs Blue Mtn. Spgs. Plw. (T) Blue Mtn. Spgs. Plw. (S) Blue Mtn. Spgs. Plw. (M) Buck Pasture * Buckskin Lake * Call Meadows * Delintment Lake (DISC.82) Disaster Peak (Nev.) Emigrant Butte (DISC.82) Fish Creek (Rev.) Fish Creek Plw. (T) Fish Creek Plw. (S) Fish Creek Plw. (M) Government Corrals Hart Mountain * Idlewild Camp Alt.(DISC.82) Lake Creek R.S. Lake Creek R.S. Plw. (T) Lake Creek R.S. Plw. (S) Lake Creek R.S. Plw. (S) Lake Creek R.S. Plw. (S) Cake Creek R.S. Plw. (M) Oregon Canyon * Pueblo Summit * Rock Springs Plw. (T) Rock Springs Plw. (T) Rock Springs Plw. (S) Silvies Silvies Pillow (T) Silvies Silvies Pillow (S) Silvies Pillow (S) Silvies Pillow (M) Snow Mountain Plw. (T) Snow Mountain Plw. (T) Snow Mountain Plw. (T) Snow Mountain Plw. (T) Snow Mountain Plw. (S) Starr Ridge Starr Ridge Pillow (S) Starr Ridge Pillow (M) Stinking Water Trout Creek *	1/29 12/29 12/29 12/29 12/29 12/29 12/29 12/29 12/29 12/29 1/1 1/1 1/1 1/1 1/1 1/3 1/3 1/3	46 	12.1 11.5 13.4 23.1 4.66 8.3 10.4 9.0 10.4 5.2 4.8 6.0 4.8 13.9	11.7 11.0 10.8 5.4 7.2 9.7 8.0 9.0 4.0 5.0 4.8 7.2 4.2 4.9 4.4 5.3	3.24.2
							N/R No Report TR Trace T = Telemetry Measurement S = Snow Tube Measurement M = Manometer Measurement (DISC.##) = Snow course manual measurement disconti in year shown-estimates to					

BASIC DATA SUPPLEMENT 2 JANUARY 1, 1983

PRECIPITATION (Inches)	CURRENT INFORMATION PAST RECORD					
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average	
Arbuckle Mountain (Morrow County)	5400	From 9/28 To 12/29	5.65"			
Beaver Reservoir (Union County)	5150	From 9/27 To 12/28	10.20"			
Billie Creek Divide (Jackson County)	5310	From 9/30 To 12/30	23.04"			
Blazed Alder (Clackamas County)	3650	From 9/20 To 12/28	44.16"			
Blue Mountain Springs (Grant County)	5900	From 9/27 To 12/29	13.40"			
Bourne (Baker County)	5800	From 9/29 To 1/3	11.50"			
Bowman Springs (Union County)	4580	From 9/27 To 12/29	6.96"			
Cascade Summit (Lane County)	4880	From 9/30 To 12/29	25.40"			
Chemult (Klamath County)	4760	From 9/27 To 1/3	13.80"			
Clear Lake (Wasco County)	3500	From 9/24 To 12/30	20.04"			
County Line (Umatilla County)	4800	From 9/27 To 12/29	8.76"			
Daly Lake (Linn County)	3600	From 9/27 To 12/27	34.56"			
Eilertson Meadows (Baker County)	5400	From 9/27 To 12/28	8.16"			
Emigrant Springs (Umatilla County)	3925	From 9/30 To 12/29	20.40"			
Fish Lake (Jackson County)	4665	From 9/30 To 12/30	19.20"			
Fourmile Lake (Klamath County)	6000	From 9/30 To 12/30	21.26"			
Gold Center (Grant County)	5340	From 9/29 To 12/28	9.60"			
High Ridge (Umatilla County)	4150	From 9/30 To 1/3	18.12"			
Hogg Pass (Jefferson County)	4755	From 9/27 To 12/28	38.88"			
Holland Meadows (Lane County)	4900	From 9/30 To 12/27	45.70"			
Hyatt Prairie (Jackson County)	4900	From 9/28 To 1/4	16.68"			
Jump Off Joe (Linn County)	3400	From 9/27 To 12/30	39.00"			
King Mountain #2 (Douglas County)	4500	From 9/29 To 12/28	32.16"			

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 2 JANUARY 1, 1983

RECIPITATION (Inches)		CURRENT IN	FORMATION	PAST RECORD		
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average	
_ittle Meadows (Linn County)	4000	From 9/27 To 12/27	46.92"			
Lucky Strike (Umatilla County)	5050	From 10/7 To 12/29	10.56"			
Madison Butte (Morrow County)	5250	From 9/28 To 12/29	8.28"			
Marion Forks (Linn County)	2730	From 9/27 To 12/28	34.32"			
Mt. Hood Test Site (Clackamas County)	5400	From 9/20 To 12/28	41.60"			
North Fork Reservoir (Multnomah County)	3120	From 10/1 To 12/28	33.78"			
Ochoco Meadows (Crook County)	5200	From 10/1 To 12/28	26.16"			
Railroad Overpass (Lane County)	2750	From 9/30 To 12/29	23.28"			
Roaring River (Lane County)	4900	From 9/28 To 12/27	28.92"			
Rock Springs (Grant County)	5100	From 9/27 To 12/29	6.96"			
Salt Creek Falls (Lane County)	4000	From 9/30 To 12/29	31.80"			
Santiam Junction (Lane County)	3750	From 9/27 To 12/28	24.96"			
Silver Creek (Lake County)	5720	From 9/28 To 12/30	9.96"			
Starr Ridge (Grant County)	5156	From 9/27 To 1/3	8.52"			
Taylor Butte (Klamath County)	5040	From 9/27 To 12/29	13.08"			
Tipton (Baker County)	5100	From 9/29 To 12/28	10.80"			
Wolf Creek (Union County)	5720	From 9/29 To 12/28	10.20"			

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



NINSER	NAME LOCATION ELEV	NUMBER NAME LOCATION ELEY	MUMBER NAME LOCATION ELEV	MANS LOCATION FLEY SEC 18P 6G1	MINBER NAME LOCATION ELEV	NUMBER HANE I OCATION ELEV	NIMBER NAME LOCALITY LEY
	OWYHEE, MALHEUR WATERSHEDS Owyhee River	16H3AP Midas (Nev) 18 39H 46E 7200 16G7P Mud Flat (1da) 34 9S 2W 5500 17G5a Oregon Canyon 8 40S 40E 6950 17H6a Quinn Ridge (Nev) 9 47N 41E 6300	18E20 Eldorado Pass 20 14S 38E 4600 18E26a Flag Prairie 32 16S 36E 4750 18E18 * Lake Creek 10 16S 33½E 5200 18F1 * Rock Spring 23 18S 32E 5100	18E23	Willow Creek 1902P • Arbuckle Mountain 33 45 29E 5400 18E1P Anthony Lake 18 75 37E 7125	21E6 * Hogg Pass 24 13S 71.E 4755 22E7 * Jump-Off-Joe 1 14S 5E 3400 22E9 * Little Meadows 17 11S 5E 4000 21E4 * Marion Forks 29 11S 7E 2600 21ES * Santiam Junction 14 13S 7E 3750	2166a Dog Hollow 1 405 14E 4900
1666 1669a 15H1A 15H4P 18E3Sa	Bear Creek (Nev) 31 46N 58E 7800 8ig Bend (Nev) 30 45N 56E 6700 a 8oulder Creek 35 135 38E 5690	16611a Red Canyon (1da) 32 11S 4W 6650 15H6P Rodeo Flat (Nev) 36 43H 53E 6800 15H3A 76 Creek (Nev) 6 44H 58E 7100 16F3AP* 511ver City (1da) 6 SS 3W 6400 1861PA 511vies 35 32S 33E 6900	18F4P Stinking Water 34 21S 34E 4800	18021 * Wolf Creek 2 6S 37E 5700 Pine Creek 1708 * Schneider Meadows 3S 6S 45E 5400	UPPER JOHN DAY WATERSHEDS 141 Upper John Doy River	21E3 Whitewater Bridge 20 105 7E 2175 McKenzie River 21E8 Gead Horse Grade 13 165 7E 3700	22616
17H2 17H1 16G10 16H6a 18H1	Columbia Basin (Nev) 31 44N 53E 6650 Ojsaster Peak (Nev) 8 47N 34E 6500	1661P South Mountain No.2(Ida) 10 85 5W 6340 15H19a Stag Mountain (Nev) 32 41N 58E 7800 16F06a Succor Creek (Ida) 36 3S 5W 6320 15H9P Taylor Canyon (Nev) 35 39H 53E 6200 16H7a Toe Jam (Nev) 29 40N 50E 7700 16H7a Toe Jam (Nev) 32 41N 58E 7800 16H7a Toe Jam (Nev) 35 39H 53E 6200 16H7a Toe Jam	BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS 121 BUINT River	Grande Ronde River 1702P* Aneroid Lake No. 2 16 45 45E 7300 18E1P Anthony Lake 18 7S 37E 7125 17010a Bald Mountain 14 & 15 4S 41E 6700	1902P * Arbuckle Mountain 33 45 29E 5400 18E16P * Blue Mountain Springs 21 155 35E 5900 18E13	22E4 Lost Creek Ranch 19 16S 7E 1956 21E7* McKenzie 34 15S 75E 4800 21E9 White Branch Slide 15 16S 7E 2700	20699* Strawberry 4 405 16E 5760 2062AP* Summer Rim 23 33S 16E 7100 20613a Sycan Flat 25 31S 14E 5500 2163P* Taylor Butte 21 33S 11E 5100
16H8a 18G2P/ 15H2 15H7 15H5		15H8	18E13 81ue Mountain Summit 6 12S 36E 5098 17E1P* Ocoley Mountain 32 11S 40E 5430 18E20 Eldorado Pass 20 14S 38E 4600 18E8* Gold Center 21 9S 36E 5340 18E9P* Tipton 34 10S 35E 5100	1809 * Beaver Reservoir 8 5S 37E 5150 1808P * County Line 28 4S 34E 4800 1806P * Lucky Strike 28 3S 32E 5050 17013a Mirror Lake 34 4S 44E 8200 1706 * Moss Spring 28 3S 41E 5850 3550 3	18E8 Gold Center 21 95 36E \$340 19E9P	Middle Fork Willomelle River 22F3* Cascade Summit 7 23S 6E 4880 22F6 McCredie Springs 36 21S 4E 2120 22F5* Railroad Overpass 21 22S 5E 2750 22F40* Roaring River 29 19S 6E 4900	Pacific Power and Light Company's Snow Stations 3 Chiloquin (PP&L) 34 345 7E 4187
16G5a 16H1 16H2A 16H4 16F05/	Hyde Pasture (1da) 31 8S 2W 5800 Jack Creek, Lower (Nev) 18 42N 53E 6800 Jack Creek, Upper (Nev) 9 42N 53E 7250 Jack Peak (Nev) 28 42N 53E 8420	Molheur River	Powder River 18E1P	17018* Mt. Howard 27 3S 45E 7910 17011a Standley 21 2S 42E 7400 1707P* Taylor Green 3 65 42E 5740 17016a TV Ridge No. 2 12 2S 43E 7000	20E2 * Ochoco Meadows 21 135 20E 520U 19F1* Snow Mountain 1 195 26E 622U 19E7 * Starr Ridge 20 155 31E 5150 18E9P * Tipton 34 105 35'E 5100	22F40* Roaring River 29 195 6E 4900 22F4* Salt Creek Falls 32 22S 55E 4000 22F14* Summit Lake 33 24S 55E 5600	4 Crystal (PP&L) 26 34% 6E 4200 5 Fort Klamath (PP&L) 22 33S 7%E 4150 8 Harriman Lodge (PP&L) 3 36% 6E 4200 LAKE COUNTY, GOOSE LAKE WATERSHEDS
16H5 17G6a 17G4a 17H3 15H20a	Laurel Oraw (Nev) 20 4SN 53E 6700 Lookout Butte 2 40S 47E 5650 Louse Canyon 2 27 64E 6440 Martin Creek (Nev) 18 44M 40E 6700	18E16P* 8lue Mountain Springs 21 153 35E 5900 18F6a 8uck Pasture 28 29S 35E 5300 18E2la 8ully Creek 11 17S 37E 5300 18F7a Call Headows 29 20S 33E S340	17EP	Imnoho River	UPPER DESCHUTES, CROOKED WATERSHEDS 153 Upper Deschutes River	Coost Fork Willomette River 22F9 Champion 12 23S 1E 4500 22F10 Golden Curry Creek 1 23S 1E 3136	Goose Loke 20G15a Bear Flat Meadow 27 36\$ 15E 5900 20G8P Camas Creek 5 395 21E 5720
(311,01	a nervice roomain (nerv) to take the year			1702P* Aneroid Lake No. 2 16 4S 4SE 7300 17014a Big Sheep 33 4S 46E 6200 UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS 131	21E22 8ald Peter 29 10S 9E 5400 21F8 Caldwell Ranch 30 21S 8E 4400 22F3 * Cascade Sumnit 7 23S 6E 4880 21F22 * Chemult Alt. 21 27S 8E 4760 21E6 * Hogg Pass 24 13S 7:E 4755	22F42* Holland Meadows 16 22S 2E 4900 22F11 Weaver Creek 35 22S 1E 2440	20G11A Cox Flat 16 375 186 5750
	24 23 22	21 20 19	18 17 16	Rock Creek 1903 * Madison Butte 30 55 27E 5250	21F4	23E1 Mary's Peak 21 12S 7W 3620	20Hia State Line (Cal) 21 48H 11E 3/50 20G9P
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D	2301 2302	Umatila Willow, Rock, Cower John Day	Granda Ronde, Jimana	18019 * High Ridge 31 3N 38E 4980 1806P * Lucky Strike 28 3S 32E 5050	Crooked River	ROGUE, UMPQUA WATERSHEDS I*** Rogue River 2364P Althouse No. 2 17 415 7N 4530	20G15a 8ear Flat Meadow 27 365 19E 5900 20G18ap Colvin Creek 12 365 21E 6550 20G11A Cox Flat 16 375 18E 5750 20G14a Flnley Corrals 11 365 16E 6300 20G6P * Quartz Mountaln 2 385 16E 5320 20G10a Snemma Valley 15 375 21E 6600
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	Ours Co	Upper Deschulds, Crooked	1873 COLUMN (1		2106P Brooks Headows 2 2S 10E 4300	22G9 South Fork Canal 12 335 3E 3500	19H1a 8ald Mountain (Nev) 17 45N 21E 6720 19G1a Hart Mountain 1 365 25E 6350 19H4a Little Bally Mt. (Nev) 8 45N 19E 6600 HARNEY BASIN WATERSHED 11 Silvies River - Silver Creek
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н	SNOW COURSES AND RELATED DATA MEASURING SITES	920H6 920H8 LEGENO 35N SANSTER County Bandlery	17H4, 017H5	15HI9	21017 Timothy Lake 20 55 of 3233	226139** 81110	1705a 1700t Creek
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The Following Organizations Cooperate in the Oregon Snow Survey Work

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Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon Department of Water Resources
Soil and Water Conservation Districts of Oregon
COUNTY

Douglas County Water Resources Survey FEDERAL

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Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Army
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